

IN THE CLAIMS:

The text of all pending claims, (including withdrawn claims) is set forth below. Cancelled and not entered claims are indicated with claim number and status only. The claims as listed below show added text with underlining and deleted text with ~~strikethrough~~. The status of each claim is indicated with one of (original), (currently amended), (cancelled), (withdrawn), (new), (previously presented), or (not entered).

Please AMEND claims 1 and 16-19 in accordance with the following:

1. (Currently Amended) A network system which communicates with a network device storing information or an object, and has a function of retrieving information, comprising:

an information network address unit monitoring information network addresses of packets transferred through the network system to track current locations of information, and assigning an information network address which is ~~a network address to a~~ an identification name of the specific information or ~~the an~~ object and non-uniquely specifies a host holding the specific information or the object, where if one host holds plural pieces of information, the host has a plurality of information network addresses and if multiple hosts have identical information, the hosts have identical information network addresses, and where said information network address unit identifies another host accessible to the user and containing the specific information if the host becomes inaccessible to the user during transfer of information; and

an information retrieval communications unit establishing communications for the network device storing the specific information or the object corresponding to the information network address, so that

a user is not required to obtain a network address through a retrieval service for checking correspondence between information and network addresses,

a host accessed by the user using the information network address necessarily contains information and if communications cannot be established using the information network address, the information exists nowhere in the network system, and

the user is able to access a nearest host or least expensive host because change information is transmitted as route information to a routing mechanism in the network system when a configuration or position of any host is changed.

2. (Original) The system according to claim 1, wherein said information network address unit comprises an information network address generation unit inputting information indicating a feature of the information or the object, and outputting the information network address.

3. (Original) The system according to claim 2, wherein said information network address unit comprises an operations unit generating the information network address in arithmetic operation.

4. (Original) The system according to claim 3, wherein said operations unit computes an error detection and correction code.

5. (Original) The system according to claim 3, wherein said operations unit computes a secure hash function.

6. (Original) The system according to claim 2, wherein said information network address generation unit is equipped with a database for accumulating correspondence between the information or the object and the information network address, and generates the information network address by searching the database.

7. (Original) The system according to claim 6, wherein said information network address generation unit adds a record type indicating the name of the information or the object to a server of a domain name system which is the database, and obtains an information network address corresponding to the name of the information or the object.

8. (Original) The system according to claim 6, wherein said information network address generation unit inquires uniform resource locator information of a plurality of WEB search engine retrieval system which is the database, and generates the information network address according to the obtained information.

9. (Original) The system according to claim 1, wherein said information network address unit comprises an adjustment unit adjusting length and representation of a result obtained by inputting information indicating a feature of the information or an object such that the result can be assigned to a part or all of an existing network address as the information network address.

10. (Original) The system according to claim 1, wherein: a portion for forming part of said information retrieval communications unit and relaying a packet addressed to the information network address comprises:

an information network address identification unit identifying the information network address; and

an information route management unit managing an information route using the information network address, wherein

said relaying portion relays the packet through the information route.

11. (Original) The system according to claim 10, wherein said information route management unit manages the information route according to information set in a packet transmitted from a previously relayed information network address.

12. (Original) The system according to claim 1, wherein said information retrieval communications unit establishes communications using the information network address by using an existing network address as the information network address and an existing communications mechanism for the network address.

13. (Original) The system according to claim 1, wherein said information retrieval communications unit assigns the information network address to an existing anycast address.

14. (Original) The system according to claim 1, wherein said information retrieval communications unit assigns the information network address to an existing multicast address.

15. (Original) The system according to claim 1, wherein said information retrieval communications unit assigns the information network address to an existing broadcast address.

16. (Currently Amended) A network terminal device which communicates with a network device storing information or an object, and has a function of retrieving information, comprising:

an information network address unit monitoring information network addresses of packets transferred through the network system to track current locations of information, and assigning an information network address which is a network address to a an identification name of the specific information or the an object and non-uniquely specifies a host holding the specific information or the object, where if one host holds plural pieces of information, the host has a plurality of information network addresses and if multiple hosts have identical information, the hosts have identical information network addresses, and where said information network address unit identifies another host accessible to the user and containing the specific information if the host becomes inaccessible to the user during transfer of information; and

an information retrieval communications unit establishing communications for the network device storing information or an object corresponding to the information network address, so that

a user is not required to obtain a network address through a retrieval service for checking correspondence between information and network addresses,

a host accessed by the user using the information network address necessarily contains information and if communications cannot be established using the information network address, the information exists nowhere in the network system, and

the user is able to access a nearest host or least expensive host because change information is transmitted as route information to a routing mechanism in the network system when a configuration or position of any host is changed.

17. (Currently Amended) A computer-readable storage medium storing a program ~~used for that when executed controls~~ a computer forming a network terminal device to perform a method for communicating with a network device storing information or an object, said ~~program~~ method comprising:

monitoring information network addresses of packets transferred through a network to track current locations of information;

assigning an information network address which is a ~~network address to a~~ an identification name of the specific information or the an object and non-uniquely specifies a host holding the specific information or the object, where if one host holds plural pieces of information, the host has a plurality of information network addresses and if multiple hosts have identical information, the hosts have identical information network addresses, and where said information network address unit identifies another host accessible to the user and containing the specific information if the host becomes inaccessible to the user during transfer of information; and

establishing communications for the network device storing the information or the object corresponding to the information network address, so that

a user is not required to obtain a network address through a retrieval service for checking correspondence between information and network addresses,

a host accessed by the user using the information network address necessarily contains information and if communications cannot be established using the information network address, the information exists nowhere in the network system, and

the user is able to access a nearest host or least expensive host because change information is transmitted as route information to a routing mechanism in the network system when a configuration or position of any host is changed.

18. (Currently Amended) A network relay device which relays communications established for a network device which stores specific information or an object using an information network address which is a network address assigned to ~~a~~ an identification name of the specific information or the object, comprising:

an information network address identification unit monitoring information network addresses of packets transferred through a network to track current locations of information, and identifying the information network address to non-uniquely specify a host holding the specific information or the object, where if one host holds plural pieces of information, the host has a plurality of information network addresses and if multiple hosts have identical information, the

hosts have identical information network addresses, and where said information network address unit identifies another host accessible to the user and containing the specific information if the host becomes inaccessible to the user during transfer of information; and

an information route management unit managing an information route using the information network address, wherein said packet is relayed to relay the packets through the information route, so that

a user is not required to obtain a network address through a retrieval service for checking correspondence between information and network addresses,

a host accessed by the user using the information network address necessarily contains information and if communications cannot be established using the information network address, the information exists nowhere in the network system, and

the user is able to access a nearest host or least expensive host because change information is transmitted as route information to a routing mechanism in the network system when a configuration or position of any host is changed.

19. (Currently Amended) A computer-readable storage medium storing a program used ~~for that when executed controls a computer forming in a network relay device which relays to~~ perform a method of relaying communications established for a network device which stores specific information or an object using an information network address which is a network address assigned to a-an identification name of the specific information or the object, said program-method comprising:

monitoring information network addresses of packets transferred through a network to track current locations of information;

identifying the information network address to non-uniquely specify a host holding the specific information or the object, where if one host holds plural pieces of information, the host has a plurality of information network addresses and if multiple hosts have identical information, the hosts have identical information network addresses, and where said information network address unit identifies another host accessible to the user and containing the specific information if the host becomes inaccessible to the user during transfer of information;

managing an information route according to the information network address; and relaying the each packet through the information route, so that

a user is not required to obtain a network address through a retrieval service for checking correspondence between information and network addresses,

a host accessed by the user using the information network address necessarily contains information and if communications cannot be established using the information network address, the information exists nowhere in the network system, and

the user is able to access a nearest host or least expensive host because change information is transmitted as route information to a routing mechanism in the network system when a configuration or position of any host is changed.